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BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Revision of the Commission's Rules	)	CC Docket No. 94-102
To Ensure Compatibility with	)	RM-8143
Enhanced 911 Emergency Calling Systems	)	

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COMMENTS OF THE
AMERICAN MOBILE TELECOMMUNICATIONS ASSOCIATION, INC.
TO THE FURTHER NOTICE OF PROPOSED RULEMAKING

Respectfully submitted,

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By: _____

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September 25, 1996

The American Mobile Telecommunications Association, Inc. ("AMTA" or "Association"), in accordance with Section 1.415 of the Federal Communications Commission ("FCC" or "Commission") Rules and Regulations, respectfully submits its Comments on the Commission's Further Notice of Proposed Rulemaking in the above-entitled proceeding.[1] The FNPR seeks additional information regarding the ability of wireless carriers to implement more stringent requirements regarding E911 capabilities in the near-term future. Specifically, the Notice queries whether the Commission should develop requirements for carriers to provide even more precise, more rapid and more frequently updated location information to Public Safety Answering Points ("PSAPs") that receive 911 calls, and questions whether E911 calling capability could be made more broadly available by the development of procedures to permit interface among technically disparate systems.

AMTA endorses the Commission's intention to base its decisions regarding expanded E911 obligations on a solid technical foundation. Such requirements must be premised on achievable equipment capabilities if they are to produce the intended results. Based on the Association's investigation, on the Petitions for Reconsideration filed in response to the Report and Order in this proceeding, and on the comments being submitted on the FNPR by parties with extensive technical expertise, in particular the Mobile and Personal Communications Division of the Telecommunications Industry Association ("TIA"), AMTA has concluded that the proposals in the FNPR are, at a minimum, technically premature. Some may be unachievable, at least at any rational cost to the public. Therefore, AMTA supports TIA's recommendation

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[1] Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 94-102, FCC 96-164 (July 26, 1996) ("FNPR" or "Notice). The Comment Date in this proceeding was extended by Commission Order, DA 96-1405 (rel. August 21, 1996).

that the Commission's efforts focus on promoting increased E911 access through technical flexibility, not regulatory dictates, in the increasingly competitive wireless marketplace.

I. INTRODUCTION

1. AMTA is a nationwide, non-profit trade association dedicated to the interests of the specialized wireless communications industry. The Association's members include trunked and conventional 800 MHz and 900 MHz SMR operators, licensees of so-called "wide-area" SMR systems, and commercial licensees in the 220 MHz band. AMTA members that are interconnected with the Public Switched Telephone Network ("PSTN") have been reclassified as CMRS. Those that fall within the definition of "covered SMRs" are subject to 911 and E911 obligations, as defined already in the Report and Order and as will be expanded as a result of the FCC's decisions on the issues raised in the instant Notice.[2] Thus, the Association and its members have a significant interest in the outcome of this proceeding.

II. BACKGROUND

2. As it has noted throughout this proceeding, AMTA supports the Commission's objective of expanding access to 911 and E911 services from wireless networks in furtherance of the protection of the public's safety. It is evident that certain Commercial Mobile Radio Service ("CMRS") offerings, notably cellular, PCS and technically sophisticated, network switched Specialized Mobile Radio ("SMR") services, are being offered broadly in the general

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[2] AMTA has filed a Petition for Reconsideration on the Report and Order in this proceeding, urging the Commission to refine its definition of "covered SMR" to include only those systems that do or intend to compete with broadband PCS offerings such as cellular and broadband PCS in serving the mass market, consumer-oriented subscribership for which the wireless unit is perceived as an extension of or replacement for the wired telephone instrument.

consumer marketplace as a supplement to, or even a replacement for, the wired telephone instrument. To the extent subscribers perceive their wireless units in this fashion, they also may expect them to have equivalent 911 capabilities, despite the significant technical complexities inherent in fulfilling that function in an untethered environment. CMRS networks should endeavor to satisfy those expectations if they are capable of doing so is a technically and economically feasible fashion and if doing so in consistent with the abilities and preferences of the affected PSAPs and the communities they serve.

3. In the Report and Order in this proceeding, the Commission has already imposed a number of 911 and E911 obligations on affected CMRS providers. The most technically demanding aspect of the FCC's decision established a two phase process for implementing E911 capability. Phase 1 requires covered carriers to be able to relay a 911 caller's Automatic Number Identification ("ANI") and base station or cell site location information to the appropriate PSAP between twelve and eighteen months after the effective date of the new rules. Phase 2 obligates them to be capable of relaying latitude and longitude information for wireless handsets within 125 meters with 67% reliability no more than five years after the effective date.

4. The FNPR seeks comment on the feasibility of imposing even more technically ambitious requirements. In particular, the Notice requests information regarding the following issues:

- requiring automatic location information ("ALI") within a 40 foot radius with a 90 percent degree of accuracy using latitude, longitude and altitude;
- setting specifications for latency and updating ALI information;
- requiring all PSAPs to accept non-code identified calls; and

- requiring covered carriers to handle calls from any mobile unit, even those operating on a different type of system in a different band and using different technology.

III. COMMENTS

5. AMTA respectfully submits that the expanded obligations being considered by the Commission are not likely to be technically feasible in the foreseeable future, and may not be so even in the longer-term. Therefore, the Association supports the recommendations submitted by TIA, which are incorporated herein by reference, and encourages the FCC to facilitate consensual efforts by the covered CMRS and PSAP communities to develop technically achievable, publicly affordable enhancements of E911 capabilities.

A. The Proposed ALI Accuracy Improvement Cannot be Achieved with Terrestrial Systems

6. TIA describes in detail in its Comments why terrestrial mobile systems are incapable of achieving the degree of location accuracy proposed by the Commission. In particular, TIA explains that it would be impossible for terrestrial networks to obtain altitude measurements of sufficient accuracy to satisfy the requirement under consideration. It also notes that such networks were designed to accommodate two-dimensional frequency re-use, not to provide for three-dimensional triangulation capability. Thus, even if the altitude obstacle could be overcome, the accuracy levels proposed would require clear propagation paths to a large number of transmitters (cells) within the relevant geographic area. This aspect of the proposal seemingly assumes that all covered CMRS systems employ a common, grid-like system design. That is not the case for the vast majority of SMR systems currently classified as covered, and may be incorrect for more rural cellular and even PCS systems, all of which have been or are being designed to provide optimal coverage for the subscriber base, rather than to achieve some

hypothetical, chessboard-like pattern of transmitter symmetry. Even where such systems exist, achieving the FCC's objective should be expected to generate substantial intra-network interference, thereby obviating the very benefits of utilizing a wireless system.

7. The alternative, supplementing the CMRS system with non-terrestrial locating capability, might prove technically feasible, but at a potentially unacceptable price to the subscriber since it would increase the cost of the unit while decreasing its battery life and other functionalities. Moreover, this approach would not constitute a simple "upgrading" of existing CMRS systems for the embedded subscriber base; it would require a wholesale replacement of network and subscriber equipment at a very substantial cost.

8. In AMTA's opinion, it is, at a minimum, premature to impose additional ALI requirements, whether relating to accuracy or timeliness. It would be particularly unwise to do so without further input from the PSAPs to whom such information would be directed and, most critically, without evidence that the public is prepared to support these capabilities with tax dollars. The American people are faced with making a number of difficult, economic decisions based on their determinations regarding the cost/benefit ratios of various services. It is by no means clear how high a priority they would place on the levels of E911 capabilities under consideration by the FCC when they are required to subsidize them. AMTA suggests that neither the FCC nor the wireless industry is qualified to substitute its judgement regarding such matters for that of the people who will be using and paying for them.

9. Instead, the Association supports adoption of the approach suggested by TIA. Individual PSAPs have a knowledge of their own capabilities and the preferences of their communities which will dictate the level of technical information they wish to obtain. If it is

determined that the public, that is, the marketplace, values E911 accuracy highly, it will make that election known to the public safety community which, in turn, will collaborate with the wireless manufacturing industry to devise economically and technically feasible solutions. There is a lengthy history of cooperation between and among these groups that should provide the FCC with a high degree of assurance that the marketplace will work in this instance to achieve a publicly beneficial result.

B. It Is Not Technically Feasible to Mandate E911 Calling Capability Across Multiple, Incompatible Systems

10. In the FNPR, the Commission solicits comments on whether it would be desirable to establish arrangements and procedures under which all wireless 911 calls could be handled by whatever network is available in the area, irrespective of the technology or band on which that system operates. Whatever the desirability of such an edict, AMTA concurs with TIA's assessment that it is technically impossible unless the FCC also elects to require a universal air interface, contrary to its express assertion in this Notice and to its commitment to reliance on marketplace forces.

11. The technical infeasibility of this concept is readily apparent in light of the variety of frequency bands and technologies utilized by carriers on which such an obligation would be imposed. Covered carriers may operate at 220 MHz, 800 MHz, 900 MHz, or even as high as 1.9 GHz. Their systems may use bandwidths as narrow as 5 kHz or as broad as 10 MHz. They are capable of deploying FDMA, TDMA, CDMA and other, as yet developing, modulation techniques. Although technological advances continue to exceed our most optimistic expectations, there are practical limitations even in highly sophisticated and innovative technical areas, such as telecommunications. AMTA is unaware of any practical method by which the

rich variety of CMRS offerings provided by covered carriers, a menu that serves multiple, disparate consumer requirements, could be conformed to a single common denominator that would permit indiscriminate E911 calling. The more appropriate approach is for industry and government to cooperate in developing consumer educational tools for subscribers that are reflective of the realities of state-of-the-art technology and responsive to public safety considerations.

IV. CONCLUSION

12. For the reasons described herein, AMTA urges the Commission to adopt rules consistent with the concerns detailed above.

CERTIFICATE OF SERVICE

I, Linda J. Evans, a secretary in the law office of Lukas, McGowan, Nace & Gutierrez, hereby certify that I have, on this 25th day of September, 1996, caused to be mailed a copy of the foregoing Comments to Further Notice of Proposed Rulemaking to the following:

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